Scottish Borders Council Pension Fund

Investment Strategy Review

May 2021

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Document Classification: Confidential

Contents

Background – SLGPS Peer Group Analysis

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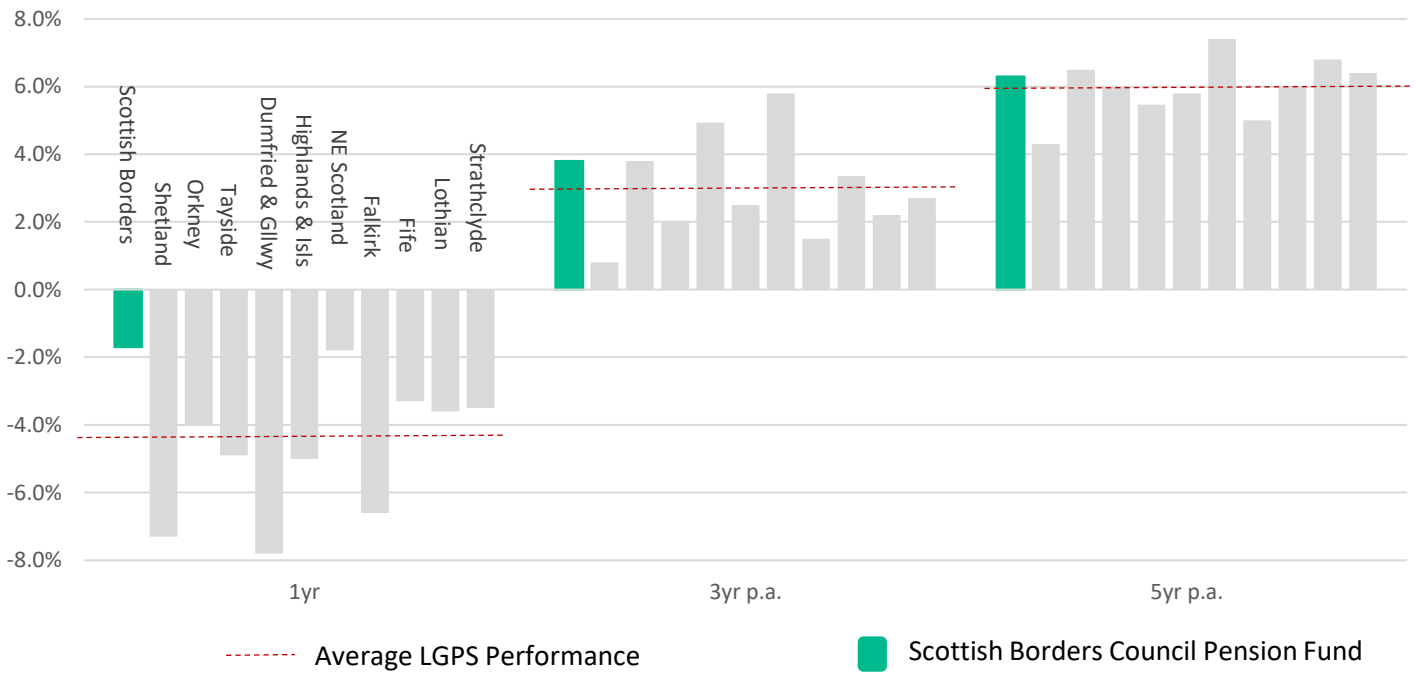
Historical Investment Return (% p.a.)

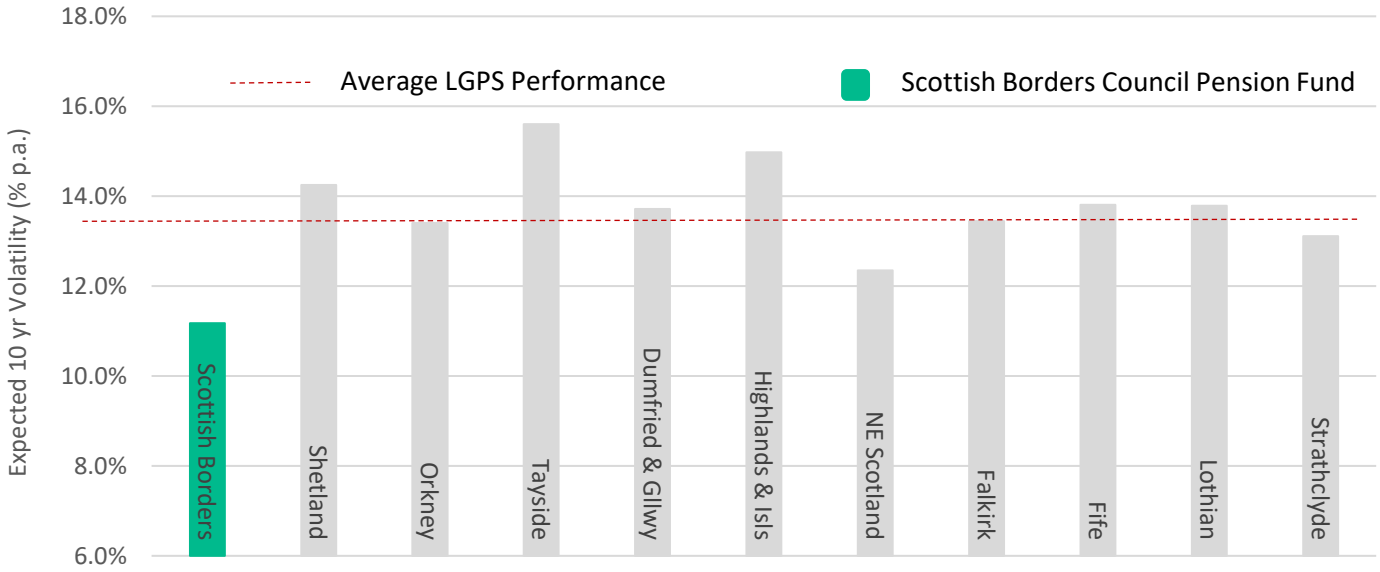
Period to 31 March 2020	Scottish Borders Fund	Average Scottish LGPS	*Relative*
1 year return (%)	-1.7%	-4.5%	*2.8%*
3 year return (% p.a.)	3.8%	3.0%	*0.8%*
5 year return (% p.a.)	6.3%	6.0%	*0.3%*



Source: Publically available report and accounts as at 31 March 2020. 3 year performance figure for Lothian Pension Fund sourced from publically available actuarial valuation report as at 31 March 2020. Information given is estimated by Isio and based on our assessment of publicly available information

Expected Volatility (% p.a.)

	Scottish Borders Fund	Average Scottish LGPS	*Difference*
10 Year Forecast Absolute Volatility (% p.a.)	11.2%	13.6%	*-c.18%*



Source: Isio ALM as at 31 March 2021. High level asset allocations for individual SLGPS Schemes were estimated using strategic allocation targets from publically available information such as report and accounts, statement of investment principles and actuarial valuation reports. Volatility figures produced are estimates based on Isio's 10 year absolute volatility forecasts and provide a broad indication of the level of risk in a particular investment strategy.

Introduction

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Introduction

Addressee

- This report is addressed to the Scottish Borders Council ("the Council") as the Administering Authority of the Scottish Borders Council Pension Fund ("the Fund").
- The focus of this report is to review the Fund's existing investment strategy, quantify the inherent risks and consider the options for the evolution of the strategy. Isio has also been asked to focus on certain key areas of the portfolio, and to recommend how these should evolve going forward.

Scope

- This report provides a detailed review of the Fund's current investment strategy, asset allocation and investment structure, including:
    - Portfolio-level risk/return characteristics;
    - The projected evolution of the funding position;
    - An assessment of the suitability of the current overall asset allocation;
    - An assessment of the suitability of the make-up of the Fund's equity portfolio, alternatives mandate, and real assets mandate, from an investment manager perspective and within the context of the wider strategy;
    - Consideration of potential opportunities which could be suitable for the Fund;
    - A range of alternative portfolios which we believe may be better aligned to the Fund's objectives considering the inflation characteristics, liquidity and overall risk/return requirements.
    - The Fund's cash flow requirements and how these are expected to evolve going forward

Current strategic benchmark

		Allocation
Equity	Passive Equity	6%
	Active Equity	34%
Alternatives	Multi-Asset Alternatives	7.5%
Public Credit	Diversified Credit	10%
	Index-Linked Gilts	5%
Private Credit	Direct Lending	10%
	Senior Infrastructure Debt	5%
	Junior Infrastructure Debt	2.5%
Property	Balanced Property	5%
	Long Lease Property	10%
Infrastructure	Infrastructure Equity	5%
Total		**100%**

Objectives

Objectives

- We understand that the Council's funding objectives, as outlined in the June 2020 Statement of Investment Principles, are:
  - To provide for members' pension and lump sum benefits on their retirement or for their dependants' benefits on death before or after retirement, on a defined benefit basis.
  - To set levels of employer contributions that will build up assets that will be sufficient to meet all future benefit payments from the Fund.
  - To build up the required assets in a way that produces employer contributions, which are as stable as possible.
- These objectives can be translated into delivering an investment return that improves the funding level over time (in order to maintain current employer contribution rates, and potentially result in future reductions in employer contribution rates), with as little volatility in the funding level as possible (to maintain stability of contributions as far as possible), and maintain sufficient assets to meet overall liabilities i.e. an overall funding position of 100% or more. The assumptions underlying the Actuary's funding basis are important factors in determining the return requirement.
- As the Fund grows in absolute terms, it will also be important to ensure that stability, relative to sponsor budgets, is maintained.

Evolution

- The Fund remains open to new members and future accrual. It is therefore growing due both due to interest accruing on past service liabilities, and due to new liability accrual. The liabilities are also maturing (the proportion of pensioner members is growing) and this will continue to change the cash flow profile of the Fund over time. The Fund has already entered a cashflow negative position, with more cash being paid out than is received in cash contributions. However, we believe the investment strategy is suitably positioned to manage the current expected shortfall.

What Return is Required?

- At the March 2020 Actuarial Valuation, the discount rate used to value the liabilities was 3.8% p.a.. This was based on the Actuary's estimate that the Fund's current investment strategy would deliver a return of 3.8% p.a. over the next 20 years, with a 70% likelihood of achieving this. For past service, the Actuary requires the Fund's assets to **deliver at least 3.8% p.a.** to support the current strong funding position. Given the methodology used to set contributions the investment return needs to be higher than this.
- The reduction in the discount rate over the period since the 2017 Actuarial Valuation (5.0% p.a. to 3.8% p.a.) is reflective of the continued decline in gilt yields over the period. This reduction in gilt yields has also driven a reduction in the expected return of individual asset classes and the Fund's overall assets.
- The discount rate is quoted on an absolute basis, however, it can be translated to reference Gilts. Whilst the discount rate has no explicit link to Gilt markets, we would expect there to be an implicit connection – in the belief that the prospective future returns from all markets are inherently linked to the risk free rate. Low prospective returns from Gilt markets would imply future returns from other markets (assuming investors are rational).
- Our analysis gives the best estimate expected return for the Fund's current investment strategy was 4.9% p.a. as at 31 March 2020.
- The difference between the expected return of 4.9% p.a. and the required return of 3.8% p.a. reflects an element of prudence in the Actuarial funding assumptions, which is to be expected. Given the significant surplus that has arisen following the valuation date, there may be some scope to reduce overall risk and return if desired. This would need to be confirmed with the Fund Actuary.
- As at the date of modelling in this report, 31 December 2020, we estimated the expected return of the Fund's investment strategy to be 4.7% p.a.

Current Strategy

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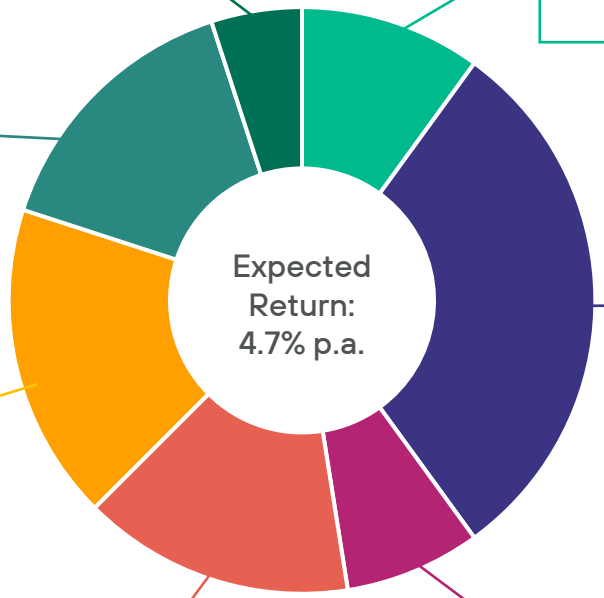
Investment Strategy Overview

Key
Target allocation (Actual allocation)

Infrastructure equity: 5% (3%)
Diversified portfolio: £28.4m (3%)

UK Equity: 10% (13%)
Baillie Gifford UK Equity: £58.5m (7%)
UBS UK Equity: £49.1m (6%)

Property (Commercial): 15% (11%)
UBS Property: £37.5m (4%)
BlackRock Long Lease Property: £57.9m (7%)



Global Equity: 30% (37%)
Baillie Gifford Global Equity: £192.6m (23%)
Morgan Stanley Global Sustain: £116.9m (14%)[1]

Private Credit: 17.5% (10%)
Partners Group DL (2016): £11.7m (1%)
Partners Group DL (2018): £16.7m (2%)
Permira Direct Lending: £25.2m (3%)
Macquarie Junior Infra Debt: £12.0m (1%)
Macquarie Senior Infra Debt: £28.9m (3%)

Public Bonds/ Credit: 15% (19%)
M&G Alpha Opportunities: £106.3m (13%)
M&G Index-Linked Gilts: £46.7m (6%)

Diversified Alternatives: 7.5% (7%)
LGT Alternatives: £57.8m (7%)

Source: Investment managers at 31 December 2020. [1]Morgan Stanley Global Sustain value includes Global Brands allocation, given the Fund switched the full allocation into Global Sustain over Q1 2021.

Current Asset Allocation – Actual vs Target

Mandate	Current Asset Allocation	Outstanding Commitment	Total Commitment (adjusted)[1]	% (adjusted)	Strategic Benchmark	Relative Position
Baillie Gifford UK Equity	£58.5m	-	£48.4m	6%	4%	+2%
UBS UK Equity	£49.1m	-	£39.0m	5%	6%	-1%
Baillie Gifford Global Equity	£192.6m	-	£182.5m	22%	18%	+4%
Morgan Stanley Global Sustain	£116.9m[2]	-	£116.9m	14%	12%	+2%
LGT Alternatives	£57.8m	-	£57.8m	7%	7.5%	-1%
M&G Alpha Opportunities	£106.3m	-	£106.3m	13%	10%	+3%
M&G Index-Linked Gilts	£46.7m	-	£46.7m	6%	5%	+1%
Partners Group 2016 Fund	£11.7m	-	£11.7m	1%	2.5%	-1%
Partners Group 2018 Fund	£16.7m	-	£16.7m	2%	2.5%	-1%
Permira Direct Lending	£25.2m	£2.5m[3]	£27.7m	3%	5%	-2%
Macquarie Junior Infrastructure Debt	£12.0m	£6.0m[4]	£17.9m	2%	2.5%	0%
Macquarie Senior Infrastructure Debt	£28.9m	£8.0m	£36.9m	4%	5%	-1%
UBS Property	£37.5m	-	£37.5m	4%	5%	-1%
BlackRock Long Lease Property	£57.9m	-	£57.9m	7%	10%	-3%
Infrastructure Equity	£28.4m	£13.9m[5]	£42.3m	5%	5%	-

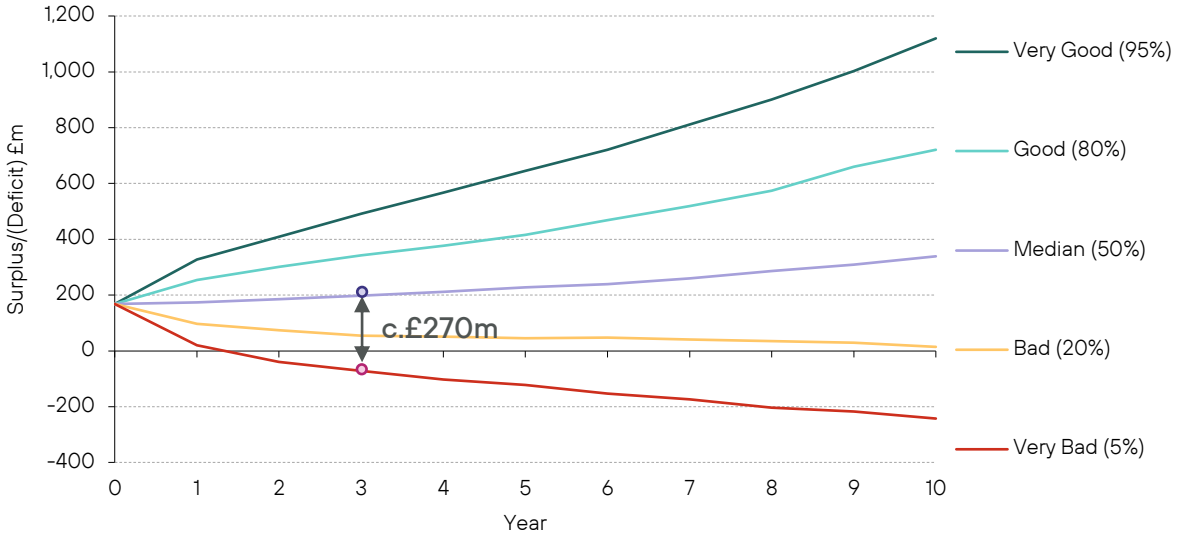
Source: Investment managers at 31 December 2020. [1]Accounts for outstanding capital commitments which are still to be drawn down. [2]Morgan Stanley Global Sustain value includes Global Brands allocation, given the Fund switched the full allocation into Global Sustain over Q1 2021. [3]Outstanding capital commitment, however, it is not expected that the manager will draw down this capital. [4]Undrawn capital commitment converted into GBP based on exchange rate at 31 December 2020. [5] Given lack of information, manual calculation made to align the overall allocation with the 5% strategic allocation. Outstanding capital commitments funded from pro-rata deduction from the Fund's global equity and UK equity mandates with Baillie Gifford and UBS.
Note: Totals may not sum due to rounding

Funding Trajectory

Comments

- The central expectation is for the funding position to improve and increase gradually over time due to investment returns, and employer and employee contributions.
- Based on the estimated 31 December 2020 position, and median predicted outcome going forward, we expect the Fund to be in a surplus of c.£200m in 3 years' time (up from c.£168m at the end of December).
- Ultimately any surplus could be used to bring down the future service cost of the Fund to the employers. This has already been seen to some degree, with the Fund's secondary contribution moving from -2.6% to -4% since the last Actuarial Valuation.
- The chart opposite highlights the degree of variation (both upside and downside) that the Fund is exposed to by the current investment strategy. This volatility could have a material impact on the funding position and the future cash funding requirements.
- Given the current investment risk in the strategy, there is a 1 in 20 chance that a deficit of c.£70m or more could arise in 3 years' time – this could trigger a shift in the secondary contribution, and potential increase in the Fund's primary contribution rate (depending on the market drivers for the change).
- Given the very strong funding position achieved, we believe there is scope to reduce investment risk to reduce the impact of any potential downside scenarios, essentially narrowing the range of potential outcomes. Having said that, the Fund needs to continue to drive forward return to maintain the funding position.

Current Strategic Benchmark



Funding Position (estimated) – 31 December 2020	
Discount Rate	Gilts + 3.4% p.a.
Current Surplus (Deficit)	c.£168m
Current Funding Level	c.125%

Forecast Funding Position – 3 Years time	
Expected deficit / surplus	c.£200m
Expected funding level	c.130%
Estimated Funding Deficit (1 in 20 chance (5%))	c.£70m

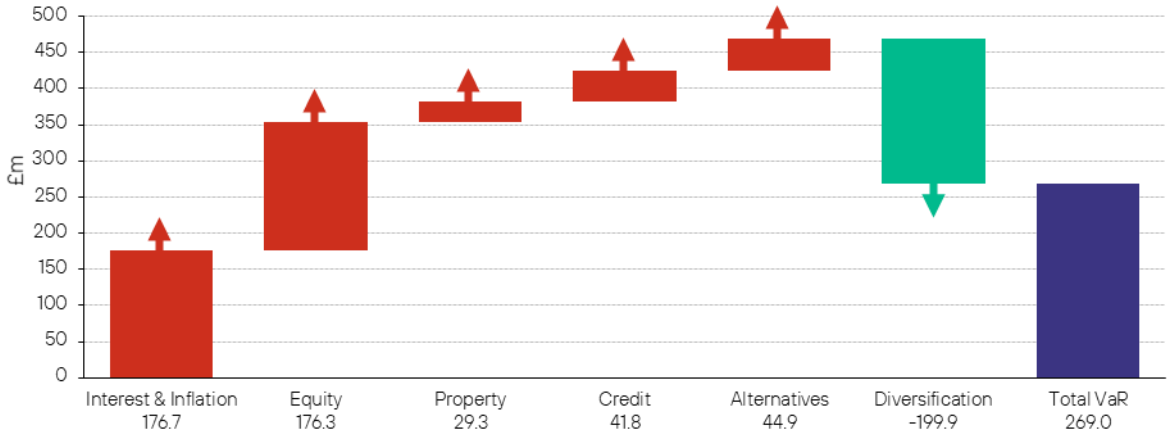
Source: Hymans Robertson, Investment managers, Isio calculations
Notes: Start funding position has been estimated by Isio, by rolling liabilities provided by Hymans from 31 March to 31 December.

Risk Analysis

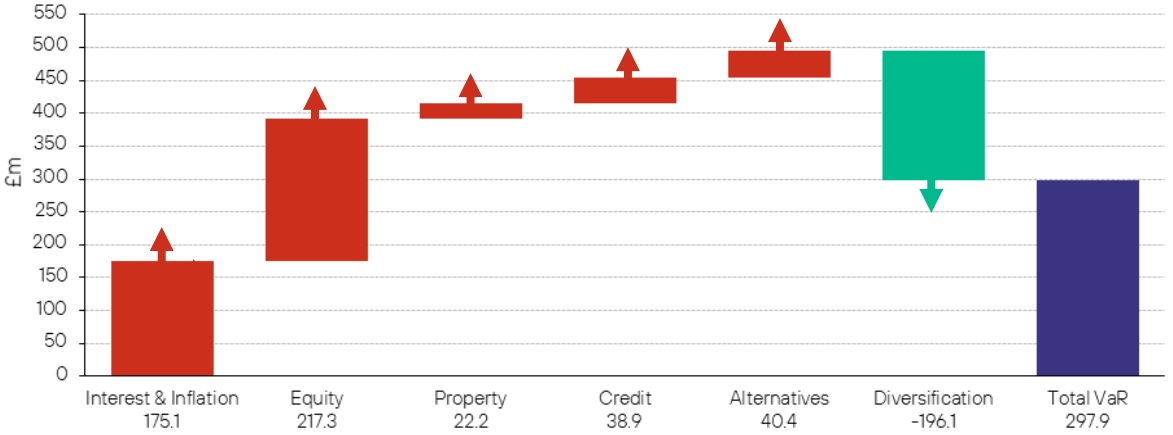
Key Risks

- The charts opposite illustrate the overall level, and composition of investment risk in both the strategic and current asset allocations, as measured by the 1 in 20, 3 year Value at Risk ("VaR"). The VaR represents the difference in the funding position in three years' time between the expected outcome and a 1 in 20 downside scenario.
- The total risk (3 year, 1 in 20 VaR) for the strategic allocation is c.£270m, i.e. that there is a 1 in 20 chance that the Fund could be c.£270m behind its expected trajectory in 3 years time.
- The Fund's key risks are its equity exposure and inflation risk inherent within its liabilities.
- The Fund's 40% strategic allocation to equities means that a fall in equity valuations would result in a material decrease in the Fund's assets (similar to that experienced over Q1 2020, though this was quickly reversed).
- The significant risk from inflation is due to the majority of the pension benefits in the Fund being directly linked to inflation. This is an area which the Fund has been actively looking to address over recent years, by continuing to build out exposure to sources of inflation - a higher allocation to inflation-linked assets provides a better match for the pension payments linked to inflation and decreases the risk position of the Fund.
- Whilst these risk exposures account for the significant majority of the Fund's overall risk exposure, they are inherently different in nature. Inflation risk is "unrewarded" whereby investors are not compensated for accepting the risk. Whereas equity risk is "rewarded", and the Fund should benefit, in the form of growth in its assets, for accepting this risk.
- We believe the Fund should look to address these risks as part of any strategic changes via the following actions:
  1) continue to increase the Fund's exposure to inflation-linked assets
  2) restructure the equity portfolio to focus on geographies/sectors expected to benefit from structural tailwinds over the coming years.

Current Strategic Benchmark – Value at Risk (3 year, 95% breakdown)



Current Actual Allocation – Value at Risk (3 year, 95% breakdown)



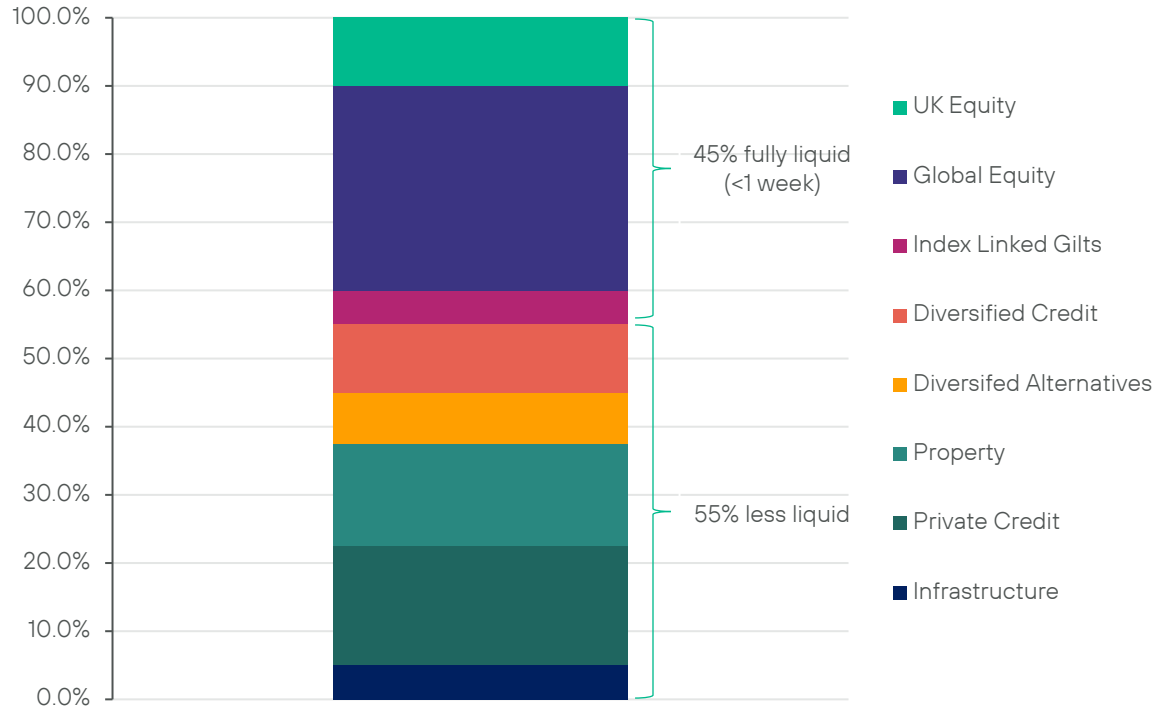
Source: Hymans Robertson, Investment managers, Isio calculations
Notes: Start funding position has been estimated by Isio, by rolling liabilities provided by Hymans from 31 March to 31 December 2020.

Liquidity profile

Key Observations

- Based on the target strategic allocation, we believe the asset strategy remains suitably balanced between liquid and illiquid asset classes. Currently, 55% of assets are invested in less liquid asset classes, with the remaining 45% being able to be liquidated to provide flexibility if required.
- Whilst the Fund is large, around 45% of the portfolio could be liquidated relatively quickly with limited market impact. We do not envisage any circumstances where the Fund would need this level of liquidity or flexibility.
- Although there is scope to further increase the allocation to less liquid markets, we believe the Fund should maintain its current sizeable allocation to equities to help generate sufficient levels of return. As such, we would not recommend that this allocation is further reduced.
- We believe there is scope for the Fund to restructure its illiquid assets to generate more attractive risk-adjusted returns, given the opportunities available in the market today.
- Typically the less liquid asset classes are sources of income which the Fund currently uses to help meet cashflow needs. Although we do not believe it will be a key driver in setting the Fund's strategic asset allocation, we have provided further details on the Fund's cashflow requirements in the Appendix.

Strategic Asset Allocation - Overview



Underlying Liquidity – Strategic Asset Allocation	
Daily	45%
Monthly	10%
Quarterly	7.5%
Illiquid (> 1 year)	37.5%

Source: Investment Managers

Areas of focus

1. Equity Portfolio
2. Alternatives Portfolio
3. Real Assets Portfolio

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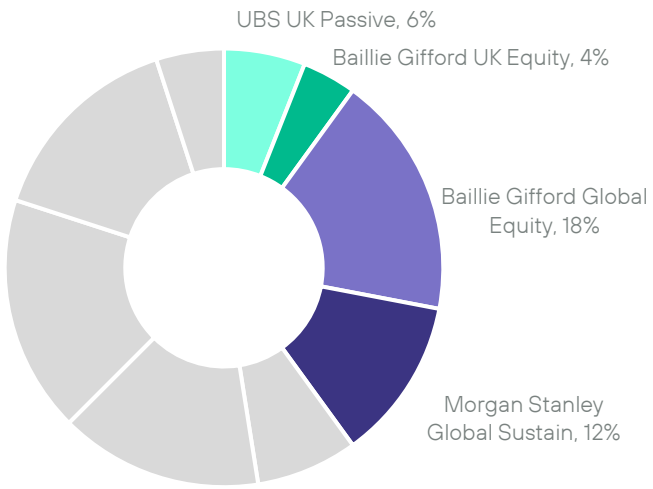
Equity Portfolio: Overview

Overview

- The Fund's equity portfolio has the largest strategic weighting (40%) within the investment strategy, and is expected to be the core driver of long term return. The equity portfolio is currently comprises four components: active mandates with Baillie Gifford (UK Alpha and Global Alpha) and Morgan Stanley (Global Sustain), as well as a passive allocation managed by UBS (UK Passive).
- The equity allocation is currently overweight, relative to the Fund's strategic benchmark (49% vs 40%). This is partly due to the strong relative performance of the Baillie Gifford mandates over recent years and due to commitments to private markets that have not yet been called down.
- The Fund has implemented significant changes to the equity portfolio over the past 5 years, including reducing the portfolio's overall exposure, reducing the UK equity bias, removing the mandate previously managed by Harris Associates, and introducing some exposure to sustainable equity mandates.
- Despite reducing its exposure, the portfolio retains a bias towards UK equities (25% of equity portfolio).
- The Fund also has a bias towards growth equities, due to the significant allocations with Baillie Gifford. This is balanced to some degree by the quality focused mandate with Morgan Stanley. The growth bias has served the fund extremely well in recent years as these stocks have significantly outperformed.
- The Fund has streamlined its allocation with Morgan Stanley, consolidating overall exposure within the Global Sustain Fund. This activity was carried out over Q1 2021, and further increased the Fund's exposure to sustainable equity.
- We believe any changes to the existing equity portfolio should continue to build on the work done to date, and focus on the following:
  1) Addressing the existing regional (and to a lesser degree sector) biases.
  2) Increasing the ESG credentials of the Fund.

Current Strategic Breakdown – as at 31 December 2020



Key Characteristics	UBS	Baillie Gifford		Morgan Stanley
Mandate	UK Passive	UK Alpha	Global Alpha	Global Sustain
Value (31 December 2020)	£49.1m	£58.5m	£192.6m	£116.9m[1]
% of Fund Assets (31 December 2020)	c.6%	c.7%	c.23%	c.14%
Style	Passive	Growth	Growth	Quality
Fees (p.a.)	0.05%	0.28%	0.28%	0.50%

Source: Investment Managers as at 31 December 2020. 1Morgan Stanley Global Sustain value includes Global Brands allocation, given the Fund switched the full allocation into Global Sustain over Q1 2021.

Equity Portfolio: Proposed Evolution

- Baillie Gifford, one of the Fund's existing active investment managers, has recently developed a range of market leading ESG focused products which we believe the Fund should consider. This will help the Fund to further increase its ESG credentials in a low cost, efficient manner, and with a manager who has already added significant value for the Fund.
- We believe that the passive mandate should be reviewed to make this more global (reducing the bias to UK equities) and to consider sustainable indices. This will likely require a move away from UBS given their limited fund range in this space.

Passive Equity Options

- There are now a range of passive equity indices that build in explicit consideration of ESG factors. We recommend that the Fund replaces the UBS mandate with a global equity index product that builds in explicit consideration of these factors. The Fund will need to undertake work on selecting an appropriate index and manager to deliver this if this is pursued.
- We include an example of one approach below in order to illustrate what this could achieve.
- **Example - LGIM Future World Fund:** LGIM launched the Future World Fund in 2018, and provides investors access to a global passive equity product, with constituent weightings influenced by individual companies ESG scores.
- LGIM utilise 28 ESG indicators (including 6 Transparency indicators) which they believe to be material, and for which they have reliable and sufficient sources of data for. Each of the 22 ESG indicators receive a score from -1 to 1, which is then applied as a factor the FTSE World Index. "E", "S" and "G" each receive an equal weighting and LGIM look to apply deductions to scores where transparency measures (e.g. tax disclosures) are not satisfied. Once scores have been finalised, LGIM look to tilt the index towards those companies which have the highest scores across the individual E, S and G criteria.
- There are a range of approaches available and we recommend the Fund should explore these as an alternative to the existing UK equity passive mandate.

Active Equity Options

- **Global Alpha Paris Aligned ("GAPA"):** Baillie Gifford has recently launched a variant of Global Alpha (the Fund's existing Global equity mandate with Baillie Gifford), which seeks to align itself with the climate objectives of the Paris agreement.
- The Paris Aligned strategy has significant overlap (c.95%) to the Global Alpha strategy. However, the mandate will adopt a carbon commitment to have a Weighted Average Carbon Intensity ("WACI") of broadly half the standard MSCI All Countries World Index. Baillie Gifford apply a quantitative and qualitative screen to the stock selection process to exclude high-emission companies that do not have an important role to play in the transition a low carbon economy.
- **Baillie Gifford Positive Change Fund**: The Positive Change Fund looks to deliver on two equally important objectives: 1) to deliver attractive long-term returns and 2) to deliver a positive change by contributing towards a more sustainable and inclusive world.
- Baillie Gifford assesses the "positive change" factor by ensuring a portfolio company can be successfully classified within one of its four impact themes: Social Inclusion and Education, Environment and Resource Needs, Healthcare and Quality of Life and Base of the Pyramid (addressing the needs of the poorest 4 billion people on the planet).
- We recommend the Committee should explore these propositions as an alternative to the existing Baillie Gifford allocations.

Equity Portfolio: Proposed Structure

Proposed Portfolio

- There are a number of characteristics to consider when restructuring the portfolio:
  - **Balance of active and passive exposure**: we propose replacing UBS as the Fund's passive equity manager, and potentially increasing the Fund's overall allocation to passive equity to 10% (from 6% today). This would act to address the existing UK bias, help manage the cost of the overall portfolio and mark a further step in relation to ESG if a sustainable approach was pursued.
  - **Balance of style exposure**: we propose that this is rotated, to reduce the Fund's bias to growth style and lock in some of the strong returns the Fund has benefited from in recent years. The existing Morgan Stanley mandate has a quality focus, which we believe suitably complements the growth focus from Baillie Gifford. However, consideration should also be given to the active/passive split, as noted above. As such, we believe the Fund should consider switching a portion of the Baillie Gifford mandate into a global ESG passive option whilst broadly balancing the style exposure. Ensuring the Fund's equity portfolio has an appropriate style balance should allow it perform well across a range of market environments.
  - **Geographical exposure:** we propose this is adjusted from the current weightings (broadly 25% UK, 75% global). We have reduced the Fund's exposure to UK equities by a removing the Baillie Gifford UK Alpha mandate and the UBS UK Passive mandate. The proposed portfolio would see the weighting to UK equities reduce, broadly in line with market capitalisation. We would propose a phased implementation.
- Although notably smaller, we believe the proposed strategic allocation to the Baillie Gifford Positive Change Fund to be appropriate given the fund is relatively concentrated in terms of stocks it holds.
- We believe this proposed structure moves the Fund forward significantly in terms of increasing its ESG credentials in a manner that retains a diversified equity portfolio, with the potential to deliver material outperformance over time.

Alternative Portfolio

Mandates	Current	Proposal
UBS UK Passive	6%	-
Baillie Gifford UK Alpha	4%	-
Baillie Gifford Global Alpha	18%	-
Morgan Stanley Global Sustain	12%	13%
Baillie Gifford Positive Change	-	2%
Baillie Gifford Global Alpha Paris Aligned	-	15%
Passive Global ESG index	-	10%
Total	**40%**	**40%**

Isio View

- **We believe that the Fund should maintain its existing strategic allocation to equities, but focus on restructuring the existing portfolio to target a more balanced, robust and sustainable approach.**
- **Baillie Gifford, one of the Fund's existing equity managers, has developed a number of market leading ESG focused products over recent years. Switching the existing allocations into one or more of these alternative funds would help the Fund achieve its objectives.**
- **We would recommend the Fund considers an alternative global index and potentially manager for the passive mandate.**

Diversified Alternatives: Overview

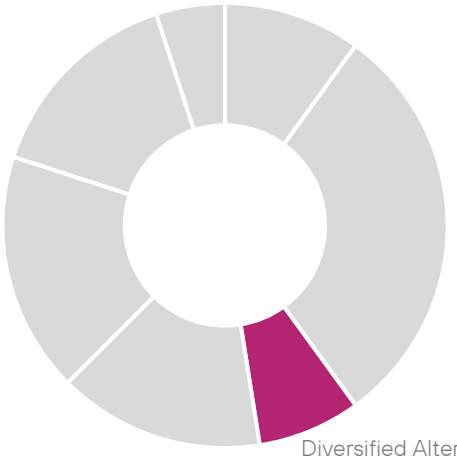
Overview

- The Fund's alternatives portfolio represents 7.5% of the Fund's strategic asset allocation, and is marginally underweight within the current asset mix. The Fund's alternatives mandate is managed by LGT, and is currently comprised solely of an allocation to the pooled LGT Crown Multi-Alternatives Fund.
- The Fund has implemented significant changes to the alternatives mandate over recent years, initially halving the exposure from 15% to 7.5% of Fund assets, and more recently switching from a segregated portfolio into LGT's pooled fund offering.
- Whilst we are broadly supportive of an allocation to diversified alternatives, we do not believe the Fund's existing mandate is optimal.
- As part of ongoing discussions with LGT, we had been made aware of a new alternatives product being launched by LGT. We have carried out an initial fact finding call with LGT to better understand the new strategy, but do not believe that this is appropriate given the high costs involved. We have included a summary, and comparison of the new strategy versus the existing mandate in Appendix 4.
- We recommend trimming the exposure to the LGT allocation further and replacing this with other investment opportunities. We consider these within the alternative strategies in the following section of this report.

Isio View

- **We do not believe the current structure of the Fund's alternatives mandate to be optimal, and that the Fund should consider the role which the mandate is fulfilling within the current strategy.**
- **Following our review, we believe the new product available from LGT is less suitable for the Fund from a strategic point of view than the existing mandate and would be more costly.**
- **We recommend the Fund look to further reduce its exposure to the alternatives portfolio, in line with the direction of travel to date.**

Current Strategic Breakdown – as at 31 December 2020



Key Characteristics	LGT
Mandate	Diversified Alternatives
Value (31 December 2020)	£57.8m
% of Fund Assets (31 December 2020)	c.7%
3 Year Fund Return (Net)	5.1% p.a.
3 Year Benchmark Return[1]	4.6% p.a.

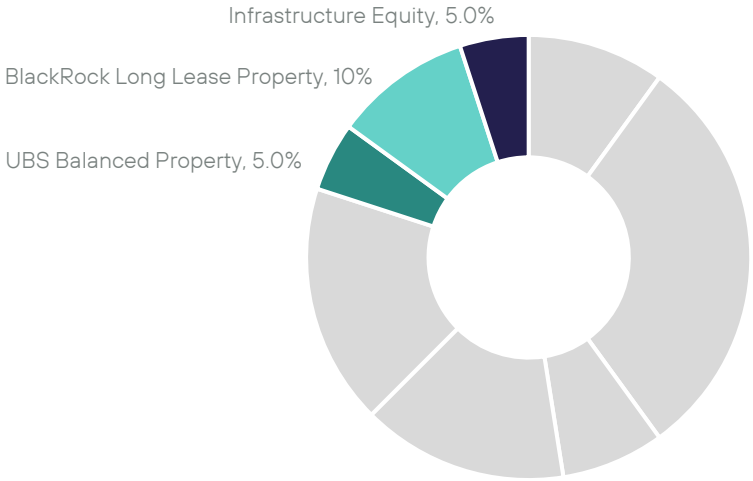
Source: Investment Manager, Isio calculations. [1]Fund benchmark shown as 3-month Libor + 4% p.a.

Real Assets: Overview

Overview

- The Fund's real assets portfolio represents 20% of the Fund's strategic asset allocation, providing inflation protection and a stable income stream.
- The Fund has worked to broaden the reach of the real assets portfolio, implementing the Long Lease Property mandate with BlackRock , and the Infrastructure Equity mandate, in conjunction with the Lothian Pension Fund, starting in 2016.
- Whilst the Long Lease Property mandate is now fully drawn, capital deployment within the Infrastructure Equity mandate has been slower than anticipated.
- The Balanced Property mandate has been significantly simplified over the past 5 years, with the number of underlying allocations significantly reduced. These changes have served to streamline the mandate, and reduce costs to the Fund. We continue to have questions over the strategic suitability of this mandate going forward and also concerns about the approach taken by UBS. We therefore recommend that this is unwound and ultimately removed from the strategy.
- We have had an initial discussions with UBS to understand what options are available to the Fund to unwind the portfolio, and provide further details in Appendix 5.

Current Strategic Breakdown – as at 31 December 2020



Key Characteristics	UBS	BlackRock	Infrastructure Equity
Mandate	Commercial – Balanced Property	Commercial – Long Lease Property	Infrastructure Equity
Value (31 December 2020)	£37.5m	£57.9m	£28.4m
% of Fund Assets (31 December 2020)	4%	7%	3%
Fully Deployed	Yes	Yes	No – still drawing down capital

Source: Investment Manager, Isio calculations.

Real Assets: Proposed evolution

Proposed Portfolio

- There are a number of factors to consider when restructuring the real assets portfolio:
  - **Balance between property and infrastructure mandates:** we continue to see attractive investment opportunities within infrastructure, some of which have a strong sustainability focus, and believe the Fund should continue to build out this exposure due to the alignment to strategic objectives it provides. Doing so would continue to increase the overall level of inflation-linked assets within the Fund's portfolio.
  - Although the UK property market has experienced significant disruption over recent years, attractive investment opportunities remain in certain sectors. We believe the strategic allocation to property remains appropriate, and that the Fund should look to restructure its existing holdings.
  - **Balance of sub-asset class exposure**: currently the Fund's property exposure focuses solely on commercial property. Any proposed changes would support the broadening of this exposure through the introduction of a residential mandate – this new allocation could be largely funded from the unwinding of the existing Balanced Property mandate with UBS - and would diversify existing holdings through the introduction of a different driver of risk/return. Some of the residential investment propositions have a strong social focus.
  - The current Infrastructure Equity mandates and Long Lease Property mandates are currently underweight. The Infrastructure Equity mandate continues to draw capital and, due to the way this is structured, maintains flexibility to increase commitments through time. The Long Lease Property allocation will require additional commitments in order to increase the allocation towards benchmark – we suggest these are funded in part from the existing core property allocation.
  - We are aware that the pace of capital deployment of the Infrastructure Equity mandate has been slower than anticipated, and that this has been a source of frustration for the Fund. We propose any increase to Infrastructure Equity be implemented via a pooled fund arrangement to speed up deployment.

Alternative Portfolio

Mandates	Current	Proposed
UBS Balanced Property	5%	-
BlackRock Long Lease Property	10%	12%
Infrastructure Equity (Lothian)	5%	5%
Residential mandate	-	2.5%
Infrastructure Equity (Pooled)	-	3%
Total	**20%**	**22.5%**

Note: Proposed weightings are based on future strategic weights.

Isio View

- **We recommend the Fund exits the UBS Balanced Property mandate, with a view to recycling the proceeds into more attractive opportunities within the UK Property market.**
- **From discussions with UBS, we believe the most appropriate way to manage this activity would be to increase the level of discretion which they have over the portfolio, allowing them to manage the disinvestment process on the Fund's behalf, within pre-agreed disinvestment guidelines.**
- **We would recommend the Fund look to continue building out the real assets portfolio, with a particular focus on investment opportunities within infrastructure. This would serve not only to increase the portion of Fund assets' with direct inflation exposure, but could also be selected to further demonstrate the Fund's commitment to ESG.**

Alternative Strategies

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Direction of Travel

Evolution Not Revolution...

- The Fund's investment strategy remains well positioned – targeting a reasonable level of return for a modest level of downside risk. This is reflective of the work which the Fund has done to restructure its investment strategy over the past 5 years.
- As such, we believe evolution of the existing asset base and manager line-up is preferable. The strategic considerations below are areas we believe the Fund could evolve to better align the strategy with the agreed funding objectives.

Key Strategic Considerations as Part of this Strategy Review

1. Restructure equity portfolio	Restructuring the existing equity portfolio to address the regional/style biases, and increase the ESG credentials of the Fund.
2. Restructure real assets portfolio	Restructuring the real assets portfolio to achieve better risk-adjusted returns, through investments in different areas of the UK property market. e.g. residential property
3. Increase inflation exposure	Increase the Fund's exposure to assets which provide inflation exposure to help manage risk e.g. infrastructure and residential property.
4. Enhance ESG credentials	Build on the work done to date by further enhancing the Fund's ESG credentials through select new investments within the equity and real assets portfolio.

Alternative Portfolios

Action	Reduced	Increased

Asset Class	Mandate	Current Strategic Allocation	Alternative Strategy
UK Equity	Passive	6%	-
	Active	4%	-
Global Equity	Passive	-	10%
	Active	30%	30%
Diversified Alternatives	Multi-Asset Alternatives	7.5%	4%
Public Credit	Diversified Credit	10%	10%
	Index-Linked Gilts	5%	6%
Private Credit	Direct Lending / Diversified Private Credit	10%	10%
	Junior Infrastructure Debt	2.5%	2.5%
	Senior Infrastructure Debt	5%	5%
Property	Commercial – Balanced	5%	-
	Commercial – Long Lease	10%	12%
	Residential – TBC	-	2.5%
Infrastructure	Infrastructure Equity	5%	8%
Expected Return (absolute)		4.7%	4.5%
VaR (3 year, 95%)		£269.0m	£255.7m
Inflation Linkage (total exposure)[1]		25%	33.5%

Notes: [1]Inflation linkage includes assets which provide either direct or indirect inflation exposure. Direct inflation exposure relates to an asset where both the capital and income provide linkage to inflation e.g. Senior Infrastructure Debt. Indirect inflation exposure relates to the income stream, generated by the underlying asset, which is linked to inflation e.g. Infrastructure Equity.

Additional Considerations

Consideration	Description	Comments
1. Realigning the illiquid mandates with the strategic benchmark	• The Fund's allocation to Direct Lending, and Long Lease Property are strategically underweight.	• 2 of the Fund's 3 Direct Lending mandates (Partners Group 2016 and Permira) have entered their distribution phase, and are in the process of returning capital to the Fund. As such, if the Fund does nothing this allocation will continue to reduce in size and move further underweight. • We propose the Fund looks to consider ways to increase this allocation back towards target. High level options are invest in a current vintage of an existing Direct Lending manager, carry out a selection exercise, so that an appropriate alternative fund can be selected or consider an allocation to Diversified Private Credit – which we believe is an attractive way to gain a diversified exposure to broader private debt markets • Consideration should also be given to the Long Lease Property mandate, and whether this should be topped up as part of any restructuring of the Fund's real assets portfolio. Given this is an open ended structure this can be done in the current mandate.
2. Overall Fund Governance	• The Fund currently has 12 mandates, implemented via 10 different managers.	• Across the 12 mandates, and 10 managers, the Fund has investments in 16 individual funds[1]. • Any restructuring of the Fund's assets should be done with a view to minimising any increase to the existing investment arrangements, to avoid further increasing the overall governance burden.
3. Reducing the Diversified Alternatives mandate	• The Fund is no longer invested via a segregated mandate with LGT, and so is not restricted by the same minimum investment amount threshold previously faced.	• The Fund recently switched from a segregated mandate to LGT's pooled fund, removing the high minimum investment amount previously faced. • We continue to believe that the current mandate has limited strategic rationale, and are of the view that the new product launched by LGT is less suitable than the existing mandate. • We would recommend that the Fund look to further reduce its exposure to this mandate, in line with the direction of travel to date.

Notes: [1] We have looked to classify the Infrastructure Equity implemented with Lothian as one mandate/manager. In reality we understand that this is implemented via a number of underlying managers, which adds additional complexity.

Additional Considerations (cont.)

Consideration	Description	Comments
4. Transaction Costs	• There is explicit transition costs associated with the movement of any assets.	• The estimated round trip transaction costs in normal market conditions for the asset classes considered (as a % of assets moved) are: • Equity — Up to 0.3% exit • Diversified Alternatives — None expected • Index-Linked Gilts — Up to c.0.1% entry • Direct Lending — None expected • Balanced Property — Up to 2% exit • Residential Property — c.3% round trip cost • Infrastructure Equity (Pooled) — Up to c.5.0% entry
5. Exposure to Partnerships	• The Fund will need to consider the overall exposure to Partnerships given regulatory limits.	• The implementation of any increases in private market exposure will need to be considered carefully as many of these less liquid investments are structured as Partnerships. • It may be feasible to access some assets via open ended investment structures if the overall limit is of concern. This could be considered for the increase to the Infrastructure allocation.

Summary and Next Steps

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Summary and Next Steps

Summary

- The Fund has delivered strong investment returns in recent years during a period in which most asset markets have trended upwards. This performance has led to a surplus, of c. £63m at the March 2020 actuarial valuation.
- Using a roll forward of Fund liabilities, we estimate that the Fund's surplus as at 31 December 2020 will be closer to £160m. The material improvement in funding position has been largely driven by the strong rebound in asset valuations experienced over the remainder of 2020, driven by the widespread monetary and fiscal stimulus packages announced in light of the Covid-19 pandemic.
- Whilst equity risk remains one of the Fund's biggest risks, we believe that the Fund should maintain its existing strategic allocation to equities, and instead focus on restructuring the existing portfolio to target a more balanced, robust and sustainable approach.
- We do not believe the current structure of the Fund's alternatives mandate to be optimal, and that the Fund should consider the role which the mandate is fulfilling within the current strategy. We would recommend the Fund look to further reduce its exposure to the alternatives portfolio, in line with the direction of travel to date.
- We would recommend the Fund look to continue building out the real assets portfolio, with a particular focus on investment opportunities within infrastructure. This would serve not only to increase the portion of Fund assets' with direct inflation exposure, helping to address the other significant risk facing the Fund, but could also be selected to further demonstrate the Fund's commitment to ESG.
- We believe the Fund should look to agree a suitable way to exit the UBS Balanced Property mandate, with a view to recycling the proceeds into other opportunities within the UK Property and infrastructure markets.

Next Steps

- The Council should consider its views on:
  - the proposals put forward for the equity, diversified alternatives and real assets portfolios.
  - the alternative investment strategy proposed, and whether there is appetite to explore this further, or if further information is required.
  - addressing the strategically underweight allocations to Direct Lending and Long Lease Property.
- Whilst secondary to the decision on the strategic asset allocation, the Fund will also have to consider the existing investment manager line-up, and whether any streamlining of this might be desired.
- We look forward to discussing this report with the Committee.

Appendices

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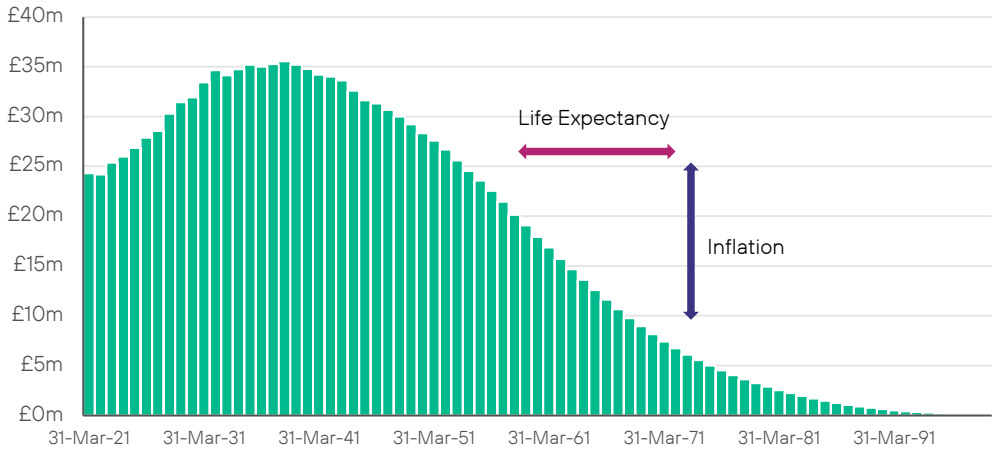
A1: Cashflow Profile

Overview

- The Fund is expected to have a number of cash outflows over the coming years. There are three core capital outflows:
  - Monthly pension payroll (which is fairly predictable);
  - Lump sum / death grant member payments (there is a degree of uncertainty over such benefits as they are more variable in nature);
  - Expenses such as manager fees, transaction costs and other miscellaneous charges.
- The Fund Actuary has shared details of the expected pension payments from the Fund. We note that these incorporate anticipated lump sum payments, but do not make any allowance for transfers out of the Fund – albeit we expect the magnitude of these to be negligible.
- The analysis in the table shows that the expected employer and employee contributions will partly offset the Fund's outgoings, though there is likely to be a shortfall each year. Any shortfall can be met using existing investment income.
- A number of the mandates within the current investment strategy generate a regular income stream which can be utilised by the Fund to largely offset the current expected shortfall. The Fund also has more than sufficient liquidity to deal with any deviations in these amounts.
- The existing diversified credit mandate with M&G also provides a regular income stream, however, at present this mandate is setup to reinvest these proceeds via the acquisition of additional units. Should the Fund wish to utilise this mandate to help offset any additional shortfall, the mandate could be switched so that the distributions are paid to the Fund Bank Account instead.
- We do not believe that there is a strong requirement to significantly increase the level of investment income within the strategy at this stage. However, there may be a greater focus on doing so at a later date.

Liability Profile



Cashflows (£m)	Year 1	Year 2	Year 3	Year 4	Year 5
Income	**£19.9m**	**£20.5m**	**£21.0m**	**£21.5m**	**£22.1m**
Employer contributions	£15.0m	£15.4m	£15.8m	£16.2m	£16.6m
Employee contributions	£5.0m	£5.1m	£5.2m	£5.4m	£5.5m
Outgo	**£24.3m**	**£24.2m**	**£25.4m**	**£26.0m**	**£26.8m**
Pension Payments	£24.3m	£24.2m	£25.4m	£26.0m	£26.8m
Net Cashflow	**(£4.4m)**	**(£3.7m)**	**(£4.4m)**	**(£4.4m)**	**(£4.7m)**

A2: Equity Portfolio – Baillie Gifford Product Overview

	Baillie Gifford UK Alpha	Baillie Gifford Global Alpha	Baillie Gifford Global Alpha – Paris Aligned	Baillie Gifford Positive Change Fund
Stewardship Approach	N/A	N/A	Two stage exclusionary screening applied to the Global Alpha strategy to ensure the portfolio is aligned with the Paris Agreement.	Long-term active management to deliver dual objectives; attractive financial returns and positive change.
Launch date	April 1995	June 2009[1]	May 2020	January 2017
Performance Objective	FTSE All-Share Index + 2% p.a.	MSCI ACWI + 2% p.a.	MSCI ACWI + 2% - 3% p.a.	MSCI ACWI + 2% p.a.
Holdings	30 – 40 stocks	c.100 stocks	94 stocks	25 – 50 stocks
Fees (% p.a.)	Tiered approach - 0.28% as at 31 December 2020	Tiered approach - 0.28% as at 31 December 2020	To be confirmed	To be confirmed
Tracking error target	N/A	N/A	4%-5%	N/A
ESG Considerations	None	None	Aims to have a weighted average carbon intensity lower than that of the MSCI ACWI Paris-Aligned benchmark.	Aims to deliver positive change by contributing towards a more sustainable and inclusive world.
Exclusions	None	None	Companies generating > 10% revenues from the extraction of coal, oil and gas, companies that generate more than 50% revenues from services provided to coal, oil and gas extraction and production.	None

Source: Investment Managers.
Notes: [1] Launch date refers to the Fund's specific inception date. [2] Top tier segregated fee.

A2: Equity Portfolio – Passive Manager Overview

	LGIM MSCI World Low Carbon Target Index	LGIM Future World Index Fund (Market Cap)	Future World Index Fund (Multi Factor)	BlackRock ACS World Low Carbon Equity Tracker Fund	BlackRock World ESG Equity Tracker Fund	BlackRock World Multifactor ESG Equity Tracker Fund
Regional Focus	Global	Global	Global	Global	Global	Global
Engagement/exclusion	Both: Exclusion – Pure Coal	Both: Exclusion – Pure coal, weapons, climate impact (plus UN Global compact violators for Market Cap)		Both: Exclusion – High carbon emissions	Both: Exclusion – Thermal coal, tobacco, weapons, UN Global compact violators	
Tracked Index	MSCI World Low Carbon Target Index	Solactive GBS Dev. Mkts Large and Mid Cap Index	FTSE AW ex CW Climate Balanced Factor Index	MSCI World Low Carbon Target	MSCI World ESG Focus Low Carbon Screened	MSCI World Select Multiple Factor ESG Low Carbon Target
ESG Objective	Minimise Carbon exposure subject to a tracking error of 0.3%	Maximise average ESG score subject to a tracking error of 0.5%	Maximise average ESG score subject to a tracking error of 0.5%	Minimise Carbon exposure subject to a tracking error of 0.3%	Maximise exposure to higher ESG scores subject to a tracking error of 0.5%	20% improvement in ESG scores than MSCI World Index
Number of stocks	1,300	1,545	2,331	1,278	489	401
AUM	£4.3bn	£654m	£4.9bn	£1.8bn	£762m	£215m

Source: Investment Managers.

A3: Alternatives: LGT Alternatives Proposal

Overview

- As part of ongoing discussions, LGT notified us towards the end of 2020 of a new alternatives product which they had launched in March 2020. Given our ongoing reservations over the current mandate, we have carried out an initial fact finding call with LGT to better understand the new strategy, and assess whether this would be a more appropriate solution for the Fund.

Summary

- LGT's new alternatives product, the LGT Multi-Alternatives Fund, has significant overlap with the Fund's existing mandate. However, there are a number of key differences, which we have looked to summarise below:
  - **Target Return**: the new fund has a higher target return versus the Fund's existing mandate (7% - 9% (before LGT fee) vs LIBOR + 4% (net of fees). LGT believe this increased target return is achievable due to the new fund's higher allocation to private equity, and reduced liquidity (allowing the manager to take advantage of the "illiquidity" premium").
  - **Underlying Liquidity:** the new fund offers reduced liquidity versus the existing mandate due to the introduction of gating provisions. These gating provisions restrict disinvestments at an overall fund level to 7.5% NAV per quarter, which could serve to further reduce the Fund's ability to disinvest from the fund (potentially up to 3 years)
  - **Management and Performance Fees:** the standard management fee on the new fund is notably higher than Fund's existing mandate (1% vs 0.675%). These fees do not account for any additional fees due to third party managers as a result of the fund of fund structure employed by both products. LGT have confirmed that the underlying manager fees for the existing mandate, and new product are 1.09% and 0.9% respectively, as at 31 March 2021. In addition, the new product has a performance fee of 5% on all return generated above 3 month Libor which the exiting fund does not.
- We have provided a comparison of the underlying asset allocations between the 2 funds on the following page.

Fund Characteristics

	LGT Crown Multi-Alternatives (Existing mandate)	LGT Multi-Alternatives
Target return	Libor plus 4% (net of fees)	7% - 9% (before LGT fee)
Expected Volatility	7% - 9%	6% - 8%
Investment Focus	Short-term tactical asset allocation	Long-term strategic allocations
Liquidity – subscriptions	Monthly, 10 days' notice	Monthly, notice by 19th calendar day
Liquidity – redemptions	Quarterly, 99 days' notice	Quarterly, 99 days' notice up to 7.5% of fund NAV
Management fee (p.a.)	0.675%	1.0%[1]
Performance fee	None	5% performance fee (over hurdle of 3 month Libor)
GBP Share Class	Yes	No

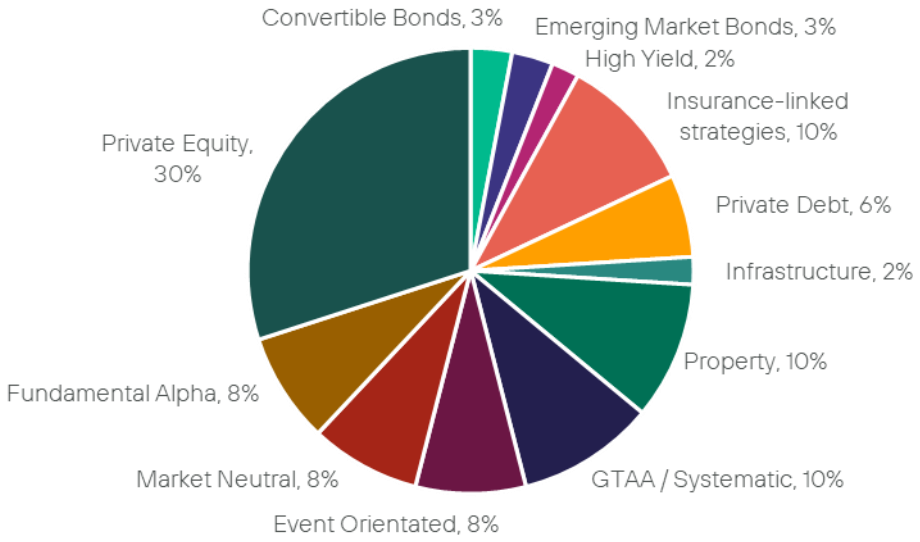
Source: LGT
Notes: Information as at 31 January 2021. [1]Tiered fee structure in place. Management fee reflects SBC current mandate size.

Isio View

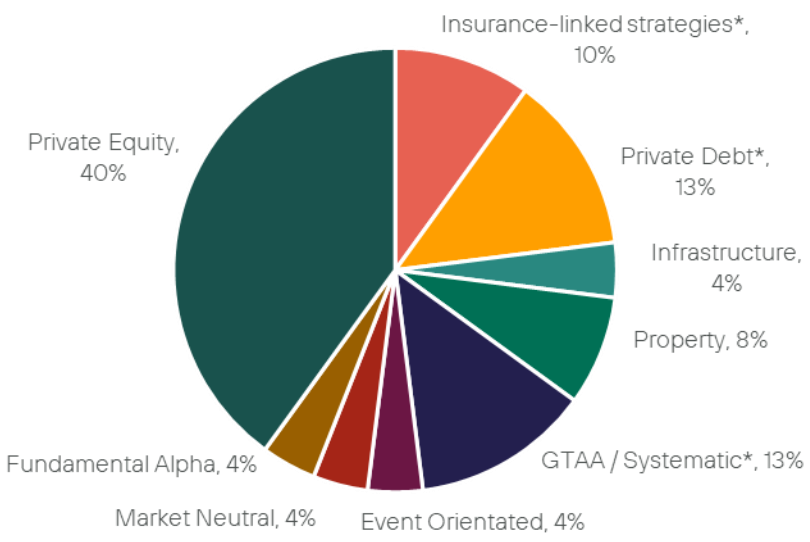
- **Whilst the new product launched by LGT has characteristics which we support e.g. increased exposure to illiquid asset classes (private debt, infrastructure, property etc.), the fund is expensive and continues to have significant overlap with the existing mandate.**
- **Having been launched in March 2020, the new fund is still building AUM, and does not yet have a GBP share class.**
- **We believe the new LGT Multi-Alternatives product is less suitable for the Fund than the existing mandate from a strategic point of view.**

A3: Alternatives: LGT Alternatives Proposal

LGT Crown Multi-Alternatives (Existing Mandate)



LGT Multi-Alternatives



Source: LGT
Notes: Information as at 31 January 2021. * A portion of the strategies are managed internally.

Comments

- The two funds have significant overlap within their underlying holdings, despite their different return objectives.
- Unlike the Fund's existing mandate, the LGT Multi-Alternatives Fund does utilise internally managed strategies within its Insurance-linked strategies, private debt and GTAA/Systematic allocations. Whilst this will result in lower underlying manager fees (with no double charging), it is not sufficient to offset the higher standard management fee applied to the fund.
- The LGT Multi-Alternatives strategy has a lower allocation to hedge fund strategies (Fundamental Alpha, Market Neutral, Event Orientated, and GTAA / Systematic), which we are supportive of (25% vs 34%). Although, we would like to have seen this allocation reduced further, in line with other alternatives products which we rate within the market.
- We are supportive of the LGT Multi-Alternatives strategy's higher allocation to illiquid assets (property, infrastructure and private debt). However, we believe the Fund could gain exposure to these asset classes in a more cost effective and efficient manner directly.

A4: Real Assets: UBS Property Proposal

Overview

- The mandate has been significantly simplified over the past 5 years, with the number of underlying allocations reduced materially. These changes have served to streamline the mandate, and reduce costs to the Fund.
- The change in investment guidelines required to facilitate the streamlining of the mandate have also served to restrict the activity which UBS is able to undertake, most notable the hard fund limit of 5. This has resulted in very limited ability for UBS to add value and the mandate operating under a "buy and hold" approach.
- As we continue to question the appropriateness of the mandate, and the fund of fund structure employed by UBS, we have had a call with the manager to understand what options are available to the Fund in order to unwind the portfolio.

Summary

- From discussions with UBS, we understand that there are 2 main options available to the Fund:
  1. **Sell down the Fund's units on the secondary market** – Altering UBS's mandate to sell positions where possible (where secondary market liquidity was available) and under set pricing guidance would result in c. 90% of the portfolio being returned over a period of 1 - 2 months with the rest thereafter. Although secondary market pricing is subject to change, UBS estimate that current market conditions are dictating a price 1-3% lower than redemption pricing for the positions they are able to liquidate. We do note that many market commentators (including UBS) expect market conditions and secondary pricing to improve in the coming months
  2. **Submit a formal redemption notice** – this would allow the Fund to achieve better pricing for its portfolio, but would significantly lengthen the time until the portfolio is unwound. UBS confirmed if this was the Fund's preferred option, they would be able to manage the process on behalf of the Fund.
- The trade-off between the two options relates to speed of disinvestment, and the pricing which would be achievable. The table opposite outlines the differences in expected pricing between the two options. Alternatively, the Fund could look to increase the scope of the investment guidelines with UBS to allow more flexibility in managing the mandate. However, this would largely result in the undoing of the activity previously carried out when the mandate was simplified.

Fund Overview and expected transaction costs

	Portfolio Weighting	Secondary Market Pricing (NAV)	Redemption Pricing (NAV)	Estimated Time to Exit – formal redemption
Hermes Property Unit Trust	20%	-1.5%	-1.2%	3 months + up to 9 months deferral
Lothbury Property Trust	26%	-4%	-1.7%	3 months + up to 12 months deferral
Patrizia Hanover Property Unit Trust	13%	Currently no buyers	-1.6%	6 months + up to 9 months deferral
Threadneedle Property Unit Trust	18%	-4%	-1.2%	4 months + no deferral limit
Nuveen Real Estate UK Retail Warehouse Fund	3%	-40%	Closed-ended	Up to 4 years
Unite UK Student Accommodation Fund	20%	-3%	-2%	6 months + no deferral limit

Source: UBS
Notes: Portfolio weighting as at 31 December 2020, excludes small cash balance. Secondary market pricing and redemption pricing based on market conditions at the time of writing.

Isio View

- **The Fund has limited options available in order to restructure the mandate, without reversing changes to the investment guidelines previously put in place to simplify the portfolio.**
- **We believe you should begin the process to exit the UBS position, however, the Fund should consider which of the two options would be most appropriate, noting the trade-off between speed of disinvestment and available pricing.**

A5: Return and Volatility Assumptions (1)

Introduction to the Assumptions

- These are our "best estimate" asset class return, volatility and correlation assumptions. We believe there is a 50:50 chance that the actual outcome will be above/below our assumptions.
- The assumptions are long-term, for a 10-year period, expressed in Sterling terms.
- Return assumptions are:
  - Annualised (i.e. geometric averages), rounded to the nearest 0.1%.
  - Expressed relative to the yield on fixed interest gilts (the annual yield at the 10-year tenor on the Bank of England spot curve). This yield was 0.2% at 31 December 2020.
  - Net of management fees.
  - Before tax. UK pension schemes are exempt from tax on investments. The impact of taxation may reduce returns for other investors.
- Volatility assumptions are based on the standard deviation of annual returns over a 10-year period, rounded to the nearest 0.5%.
- Bond volatilities are sensitive to the duration of the index. Our Fixed Interest Gilts (FIG) and Index-Linked Gilts (ILG) assumptions both relate to Over 15 Year indices, but the cashflow profile of the ILG index is considerably longer than the FIG index. Hence the difference in volatilities does not necessarily mean that real yields are assumed to be more volatile than fixed yields.
- Correlation assumptions are based on the correlation of annual returns over a 10-year period, rounded to the nearest 5%.

Limitations and Risk Warnings

- There can be no guarantee that any particular asset class or investment manager will behave in accordance with the assumptions.
- The assumption setting process is subjective and based on qualitative assessments rather than a wholly quantitative process. Newer asset classes can be harder to calibrate due to the lack of a long-term history. Some asset classes may rely on active management to help deliver the assumed return. The returns on illiquid assets may vary by vintage; in these cases the quoted return expectation is necessarily an estimate encompassing multiple vintages.
- Where these assumptions are used within asset-liability modelling, please note that the model's projections are sensitive to the econometric assumptions. Changes to the assumptions can have a material impact upon the modelling output

A5: Return and Volatility Assumptions (2)

Asset Class	Sector [1]	Return [2]	Volatility [3]
Equity	Developed Markets – Passive	4.0%	20.0%
	Developed Markets – Core Active	4.5%	20.5%
	Global Unconstrained	5.0%	21.0%
	Developed – SmallCap Passive	4.6%	24.0%
	Emerging Markets – Passive	5.0%	28.0%
Property	UK Balanced Property	2.3%	13.0%
	Long Lease Property	2.5%	8.0%
	Private Rented Sector	3.0%	13.0%
	Global Property Secondaries	6.0%	30.0%
Hedge Funds	Multi-Strategy Fund of Funds	2.5%	10.0%
	Global Macro	3.0%	13.0%
DGF	DGF (lower risk) [5]	2.8%	10.0%
	DGF (higher risk) [5]	3.5%	12.5%
Alternatives	Private Equity	6.5%	30.0%
	Diversified Alternatives	6.0%	22.0%
	Infrastructure Equity	4.6%	12.0%

Asset Class	Sector [1]	Return [2]	Volatility [3]
Credit [4]	Corp. Bonds (IG All-Stk) – Passive	0.6%	6.5%
	Corp. Bonds (IG All-Stk) – Active	0.9%	6.5%
	Corp. Bonds (IG >15y) – Passive	0.5%	8.5%
	Corp. Bonds (IG >15y) – Active	0.8%	8.5%
	Absolute Return Bonds	1.5%	4.0%
	CLO	2.5%	9.0%
	Direct Lending	4.2%	10.0%
	Distressed Debt	7.0%	16.0%
	Diversified Credit	2.5%	11.0%
	Infrastructure Debt – Senior	2.0%	6.0%
	Infrastructure Debt – Junior	3.3%	9.5%
	Multi-Asset Credit (lower risk)	2.6%	6.5%
	Real Estate Debt – Senior	1.8%	6.0%
	Real Estate Debt – Junior	5.0%	14.0%
	Semi-Liquid Credit	3.7%	9.0%
Gilts	Fixed Int. Gilts (>15y) – Passive	0.0%	7.0%
	Index-Linked Gilts (>15y) – Passive	0.0%	11.5%
Cash	Cash	0.0%	1.0%

Notes:
Please refer to full explanations and caveats on previous pages.
[1] Includes active management except where specified as passive.
[2] Expected return per annum, net of fees, relative to the yield on fixed-interest gilts.
[3] Expected standard deviation of absolute annual returns.
[4] Includes allowances for downgrades and defaults.
[5] "Lower risk" and "higher risk" are relative descriptions within the asset category only, with no wider meaning.
Source: Isio

A6: Modelling Methodology (1)

Data and Sources

- Information on characteristics of the Fund's liability profile, including the split between membership types, was taken from information provided by Hymans Robertson in relation to the 31 March 2020 actuarial valuation initial results.

Modelling Principles

- SOFIA is a stochastic model that simulates a large number of possible future economic outcomes, in which financial conditions develop in a number of different ways, defined by assumptions for average outcomes, range of variability, and inter-dependency between different markets.
- The high-level market scenarios are generated by a third-party Economic Scenario Generator (ESG) provided by Moody's Analytics. The ESG is an industry-standard tool that is widely used by financial institutions (e.g. insurers, asset managers, and investment banks).
- Based on the scenarios generated by the ESG, SOFIA simulates asset-class returns calibrated to Isio's asset-class assumptions.
- SOFIA takes the initial starting position of the assets and the liabilities, and projects these values forward under the simulated scenarios, taking into account any relevant inflows and outflows.
- Different investment strategies are modelled in order to illustrate the effects of different allocations. In each case, SOFIA assumes that the strategy remains constant over the full projection period. Assets are annually rebalanced back to the original allocations.

Modelling Results

- The results of the projections are shown by ranking the calculated results from best to worst in each year, and presenting the following outcomes:
- Median: this is the middle outcome and can be thought of as the "expected result". Half of the modelled outcomes are better than this and half are worse.
- Bad: this splits the results so that there is a one in five (20%) chance of having a worse outcome. This is a measure of risk.
- Very Bad: this splits the results at a one in twenty (5%) chance of having a worse result. This is a more extreme measure of downside risk.
- Good and Very Good (where shown): these illustrate possible positive outcomes at the 20% and 5% levels respectively.
- The "Value at Risk", where shown, is defined as the difference between the Median outcome and the Very Bad outcome, i.e. it represents the variability of funding outcomes and shows the magnitude of the possible downside from the expected result. Please note that this is not the same as the possible downside loss from the starting position.

A6: Modelling Methodology (2)

Compliance Statement

- This report, and the work relating to it, complies with "Technical Actuarial Standard 100: Principles for Technical Actuarial Work" ("TAS 100").
- This report has been prepared for the purpose of assisting the addressee in their review of the investment strategy. If you intend to use it for any other purpose or make any other decisions after considering this report, please inform Isio and we will consider what further information or work is needed to assist you in making those decisions.

Material Assumptions

- Isio's central asset-class assumptions are assessed and revised at each calendar quarter-end. The assumptions used within this modelling exercise are set out in the Appendix.
- Certain assumptions are sourced directly from the Moody's Analytics ESG and available market data, or set via adjustments to these sources. Where required or deemed to be more appropriate, assumptions are entirely determined by Isio. The assumption setting process is subjective and based on qualitative assessments rather than a wholly quantitative process. Where judgement is required, input is received from Isio's internal asset-class research teams.

Limitations and Risk Warnings

- The only risk factors considered in our modelling are those that affect the values of pension schemes' assets and the financial assumptions used to value schemes' liabilities. Some of the risks that are not reflected include demographic risks (e.g. uncertainty of life expectancy), future changes to members' benefits, and legislative risks. The modelling results should therefore be viewed alongside those risks, as well as other qualitative considerations including portfolio complexity, governance burden, and liquidity risk.
- The model's projections are sensitive to the starting position and the econometric assumptions. Changes to the assumptions can have a material impact upon the output. There can be no guarantee that any particular asset class or investment manager will behave in accordance with the assumptions. Newer asset classes can be harder to calibrate due to the lack of a long-term history.
- The modelling analysis is based on portfolios containing a range of asset classes and different approaches to fund management. Clients should not make decisions to invest in these asset classes or approaches to fund management based solely on the modelling analysis.
- Portfolios that make use of derivatives are exposed to additional forms of risk and can experience losses greater than the amount of invested capital.
- No guarantee can be offered that actual outcomes will fall within the range of simulated results. Actual outcomes may be better than the simulated 95th percentile or worse than the simulated 5th percentile.

A6: Modelling Methodology (3)

Liability Basis

- Where the model illustrates a scheme-specific funding basis (e.g. Technical Provisions), the funding basis is calculated in the same way across all the investment portfolios modelled. We therefore focus on the effect of investment strategies on asset values and hence surplus/deficits, without the distorting effect of differing discount rates. However, in cases where the discount rate allows for a risk premium, the magnitude of the risk premium may depend on the proportion of return-generating assets in the portfolio, and therefore in practice the funding basis may be different under different investment strategies.

Contribution Basis

- The model's projections may be based on either fixed or variable contributions:
- "Fixed contributions" means that the current schedule of deficit contributions is assumed to remain in place for the full projection period. The purpose of this is to illustrate pure investment risk, showing the effect of differing investment strategies without the distorting impact of different amounts of money being contributed. In practice, however, the long-term downside outcomes would be less likely to be reached, as poor intermediate outcomes would lead to a requirement for additional contributions after future valuations.
- "Variable contributions" means that the model simulates future actuarial valuations every three years, and calculates the future deficit contributions that might be required under the particular situations being projected. This illustrates the range of possible future contribution requirements.
- In addition to the deficit contributions, the model also calculates contributions required to fund future service accrual, if there are active members accruing additional pension entitlements. In this case a small amount of variability arises from the range of possible future inflation projections. Therefore the "fixed contribution" projections may still show minor differences in contributions between, for example, Median and Bad outcomes.

A7: Disclaimers

- This report has been prepared for the sole benefit of the Scottish Borders Council, as administering authority of the Scottish Borders Council Pension Fund and based on their specific facts and circumstances and pursuant to the terms of Isio Group/ Isio Services Ltd's Services Contract. It should not be relied upon by any other person. Any person who chooses to rely on this report does so at their own risk. To the fullest extent permitted by law, Isio Group/ Isio Services Ltd accepts no responsibility or liability to that party in connection with the Services.
- The information contained within the report is available only to relevant persons, and any invitation, offer or agreement to purchase or otherwise acquire investments referred to within the report will be engaged in only with relevant persons. Any other person to whom this communication is directed, must not act upon it.
- In the United Kingdom, this Report is intended solely for distribution to Professional Clients as defined by the Financial Conduct Authority's Conduct of Business Sourcebook.
- This report has not therefore been approved as a financial promotion under Section 21 of the Financial Services and Markets Act 2000 by an authorized person.
- Isio Service Limited is authorised and regulated by the Financial Conduct Authority FRN 922376.
- The output from our modelling is based on a large number of underlying assumptions. Changes to these assumptions can have a material impact on the results of the modelling.
- The outcomes shown above are not intended to be the best possible, or worst possible outcomes. The actual outcome could be worse than the 5th percentile, or better than the 95th percentile.
- The modelling analysis is based on portfolios containing a wide range of asset classes and different approaches to fund management. Clients should not make decisions to invest in these asset classes or approaches to fund management based solely on the modelling analysis.
- The only risk factors we have considered in our modelling are those that affect the values of pension schemes' assets and the financial assumptions used to value schemes' liabilities. Some of the risks we have not considered include demographic risks such as the life expectancy of pension schemes' members and future changes to members' benefits.

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